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BY

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OF NEW YORK.

FROM

THE MEDICAL NEWS,

October 17, 1891.

[Reprinted from THE MEDICAL NEWS, October 17, 1891.]

SYPHILITIC SPONDYLITIS IN CHILDREN.[1]

By JOHN RIDLON, M.D.,
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ON October 15, 1886, before the Section on Orthopedic Surgery of the New York Academy of Medicine, I read a paper entitled "Syphilitic Joint-disease in Children," and exhibited patients with the disease located at the ankle, knee, hip, wrist, and finger-joints, and in the spine. All cases had been treated by immobilization, and each case had been experimentally observed for varying periods with and without anti-syphilitic medication until the diagnosis had appeared to me to be conclusive, when each was finally placed upon the treatment that was continued until its final cure.

Notwithstanding the fact that these cases differed somewhat in their clinical aspects from ordinary tuberculous disease when located in the various joints; that nearly all gave a clear history of syphilis in the parents, and at some time in their course had presented other well-recognized syphilitic lesions; that while under the anti-syphilitic medication all had shown marked improvement, which they had failed to show under immobilization alone—notwithstand-

[1] Read before the American Orthopedic Association, at Washington, D. C., September 24, 1891.

ing these things, no one of the orthopedic surgeons present was willing to admit that the joint-lesions presented were syphilitic, but insisted that they were all of the ordinary tuberculous variety. One eminent man went so far as to say that in his extended experience in the treatment of chronic joint-disease he had frequently observed the curative effects of mercury upon tuberculosis. Indeed, so unanimous and positive was the opinion among my colleagues that there was no such thing as syphilitic joint-disease that I had not the temerity to publish my paper. However, five more years of observation have not only confirmed the views that I then held, but I have been led to believe that syphilitic joint-disease is of much more frequent occurrence than I then supposed, and I have ventured once more to bring forward a portion of the subject for consideration.

All of my observations have been among children in whom there was no evidence of a primary syphilitic lesion, and in very many I have sooner or later been able to trace a syphilitic taint in one or both parents; on this alone I have felt justified in assuming that the disease was inherited. It should be known that no microscopic examination has been made by me to demonstrate the presence of the syphilitic bacillus or the absence of the tubercle bacillus, and that I do not profess to know what relation exists between tuberculosis and syphilis in the second and third generation. Clinically, however, there can be no doubt of their relation Ricord and Maisonneuve taught that syphilis, especially in the tertiary form, could be transmitted to

the offspring as scrofula, phthisis, and rhachitis; and Bumstead and Taylor (*Venereal Diseases*, fourth revised edition, p. 735) say: "Syphilis is generally transmitted only to the second generation; exceptionally, in case of excessive activity of the disease in the first inheritor, it may appear in the third generation."

The diagnosis of syphilitic joint-disease in a child does not necessarily imply an accusation of one or both parents, for, if "one-third of all children procreated of syphilitic parents are dead-born, and of those born living 24 per cent. die within the first six months of life," and if "in case of infection of both parents the disease is likely to be transmitted in an extreme form, resulting in death of the fetus, or in the early manifestation of symptoms," it would not be unfair to conclude that some cases of syphilitic joint-disease in children that appear as late as from the tenth to the fifteenth year, like some other syphilitic symptoms, may have been transmitted from the original sin of a grandparent, the parent having escaped, or at least having never been conscious of any syphilitic manifestation. Bearing upon this, let me again quote from Bumstead and Taylor: "These cases of late development are rather rare, although we have seen fully two dozen in which there were such lesions at the third, sixth, eighth, twelfth, fifteenth and twentieth years. . . . . Besides the cutaneous and visceral lesions of the first year or two, other syphilitic affections are frequently observed. In many cases the diaphyso-epiphyseal lesions of the bones appear during uterine life, and run their course in the early months of the

disease, possibly relapsing at a later period ; or they may appear for the first time during the first year of life. From the fourth up to the twentieth year the shafts of the bones may be affected by periostitis, and joint-affections often occur. . . . . Dactylitis is usually observed in very young children ; it may also occur as late as the twentieth year." Notwithstanding this teaching, and that of numerous English, French and German observers, syphilitic joint-disease in children has no place in the orthopedic literature of this country.

One gentleman, who had the opportunity of examining all of the patients reported upon in my former paper, said that he did not consider any of them as cases of syphilitic joint-disease, but as "tubercular joint-disease modified by inherited syphilis." It has seemed to me that it would be a more correct expression of the condition, provided the tubercle bacillus can be demonstrated to be present in these lesions, to call them syphilitic joint-disease modified by tuberculous infection. It is well recognized that traumatic joint-affections, if neglected in treatment and prolonged by use, readily become infected with the tubercle bacillus ; and it may not be an unfair assumption to claim that the bone and joint-lesions due to syphilis in the progenitors, when neglected or refused remedial medication, also readily become the seat of tuberculous infection. The symptoms, prognosis, and treatment of these cases are quite different from the cases primarily traumatic or tubercular.

The following case, which is not an imaginary one, is instructive :

A young child, of a clean mother, but whose father at the time of the conception was suffering from tertiary syphilis, developed chronic disease of a joint; he was treated with anti-syphilitic remedies and kept in bed, but without mechanical restraint, and recovered after a few months, with a joint normal in all its appearances and functions. Subsequently he developed a chronic disease in another joint, which presently exhibited the same symptoms and signs that had been observed in the former joint-affection. He was now subjected to mechanical treatment without medication. An abscess appeared and was allowed to open spontaneously. Once or twice a fortnight this sinus was exposed for some time in a room crowded with patients suffering from tuberculous lesions; it was washed with water from a dirty tin basin that had been used for years by hundreds of patients for washing away the discharge from tuberculous sinuses, and it was then dressed with a pad of common oakum taken from an open box, in which it had lain for months, exposed in this room daily crowded for three or four hours with patients dripping with tuberculous pus. At the end of some months of this treatment the surgeon in charge, as he afterward told me, confirmed his diagnosis of tuberculous joint-disease by finding tubercle bacilli in the discharge from this patient's sinus. The patient continued for more than two years under the most approved mechanical treatment without apparent improvement in the condition of the joint or diminution in the amount of discharge from the sinus. Then, under a comparatively short course of mercury and iodide of potash, the sinus closed and all symptoms of joint-disease disappeared—leaving behind, however, a deformed and stiff joint.

Syphilitic spondylitis differs in no way from syphilitic joint-disease located elsewhere, except as it is modified by its peculiar surroundings. In the superficial joints, where the infiltration of the soft parts and bone can be readily seen and felt, the onset of the disease is very slow, and months may pass before pain is complained of or disability becomes serious ; but in the spine, where the lesion is located in and about the anterior surface of the vertebral bodies, far beyond sight and touch, the slow advance of the early symptoms escapes recognition and the onset usually appears to be comparatively rapid. On any motion the distant pain is complained of, and sometimes within a few days the patient is unable to stand without support. If located in the dorsal region, the kyphosis soon appears with a sharp angle, formed of but one or two spinous processes, and with a long sweeping curve above and below. In the lumbar region, the kyphosis is slow to appear, often not appearing until marked psoas-contraction can be made out, and perhaps not until an abscess has formed ; but lordosis is an early and well-marked symptom.

When the disease is once established, it seems to follow the rule of all syphilitic lesions, and is a cumulative process rather than one of degeneration —it is a hyperplasia rather than a molecular disintegration. When a certain point has been reached, resolution takes place, or the new tissue dies and an abscess rapidly forms. If the abscess can be evacuated under favorable conditions the disease often goes on to a rapid and complete recovery. Abscesses that are not within reach will almost in-

variably undergo rapid resolution when, under the influence of the mercurials, the patient is once well.

If no syphilitic history can be obtained from either parent, and if it cannot reasonably be suspected, an examination of the spine alone may not be sufficient to warrant the diagnosis of syphilis. Other things must then be taken into consideration; for, although a syphilitic spine may, and no doubt does, often exist without there being or having been other syphilitic lesions, the presence of such lesions is evidence of such value that the patient should always be carefully examined.

Spondylitis in very young children, that is to say, under three years of age, and spondylitis associated with chronic disease of some other joint, or in another portion of the spine separated by a healthy area, is in my experience more often syphilitic than tuberculous. Such cases always repay a careful examination and a strict watch for the appearance of other syphilitic manifestations, namely, nasal catarrh with the formation of reddish-brown crusts, suppurating otitis, corneal opacities, interstitial keratitis, Hutchinson's teeth, periostitis, cutaneous eruptions, and sores about the anus and genitals. In my experience, the most common associated symptoms have been the bone and joint-lesions at some distant point, and the least common have been the skin-eruptions.

The treatment of syphilitic spondylitis should be both mechanical and medicinal; but the mechanical plays by far the less important part, and rest in bed or on some form of portable bed will be found to be more demanded than braces. Rest in the

recumbent posture during the painful stage is absolutely essential, while the application of specially devised apparatus may be looked upon more in the light of a luxury than a necessity. The medicinal treatment consists of mercury and iodine. Large doses should be used; if the stomach will tolerate it, as much as one-thirteth to one twenty-fourth of a grain of the bichloride or biniodide, with from five to forty grains of potassium iodide three or four times a day. If the stomach proves irritable, mercury with chalk in from three- to five-grain doses, with inunctions of blue ointment, are advisable. Tincture of iodine in from one- to ten-drop doses may be given. It will be found that these children usually bear these medicines in as large doses and as well as do adults.

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